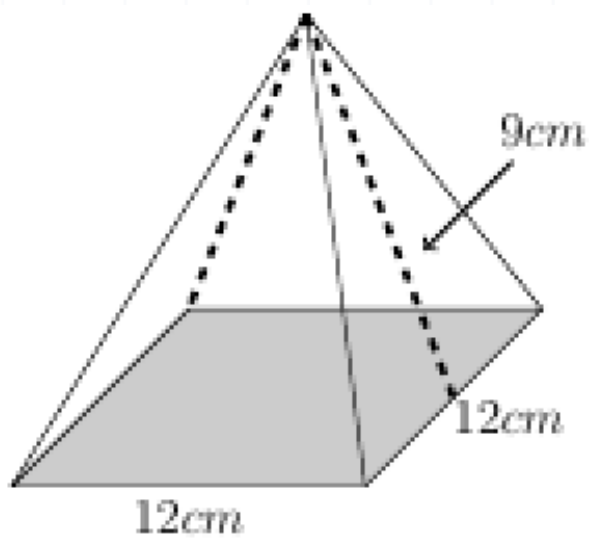


Topic: Nets/Volume/Surface area of pyramids

Question: Find the surface area of the pyramid.

What is the surface area of a square pyramid with a base of 12 cm by 12 cm and a lateral height of 9 cm?



Answer choices:

- A 216 cm^2
- B 360 cm^2
- C 442 cm^2
- D 576 cm^2



Solution: B

Use the surface area formula for a pyramid.

$$S = \frac{1}{2}lp + B$$

Plugging in the dimensions we've been given, we get

$$S = \frac{1}{2} \cdot 9 \cdot 48 + 12 \cdot 12$$

$$S = 216 + 144$$

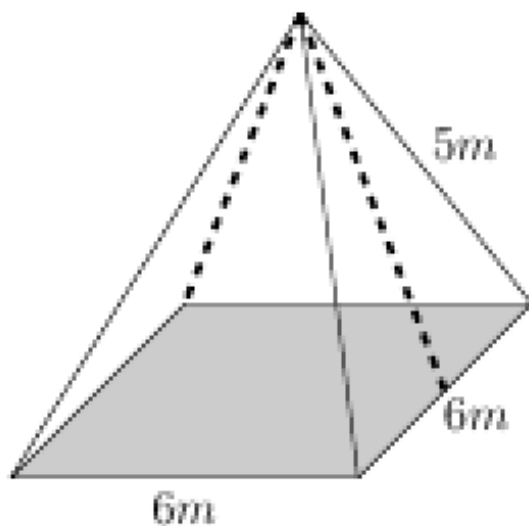
$$S = 360$$



Topic: Nets/Volume/Surface area of pyramids

Question: Find the surface area of a pyramid.

What is the surface area of a square pyramid with a base of 6 m by 6 m and an edge length of 5 m? Note: the edge length isn't the lateral height.



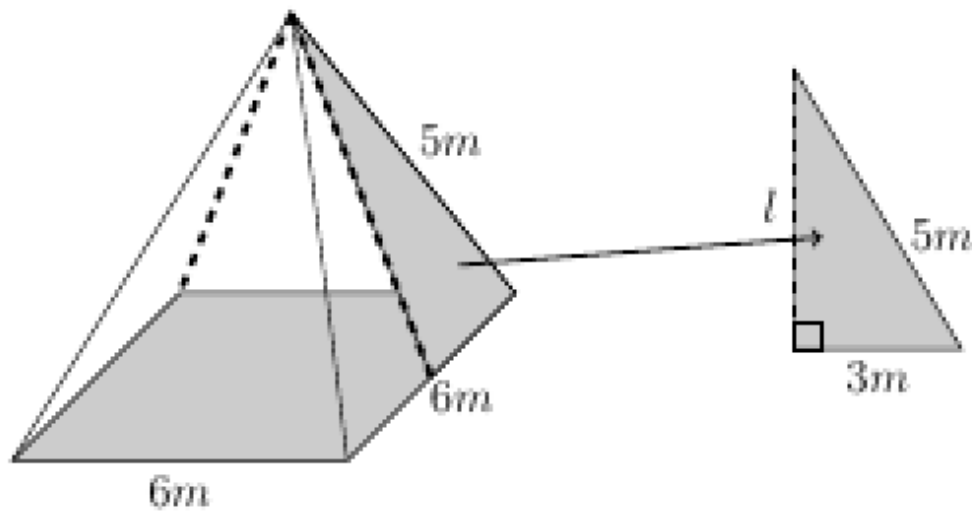
Answer choices:

- A 84 m^2
- B 96 m^2
- C 114 m^2
- D 132 m^2



Solution: A

First, find l by using the shaded triangle and the Pythagorean Theorem.



$$3^2 + l^2 = 5^2$$

$$9 + l^2 = 25$$

$$l^2 = 16$$

$$l = 4$$

Now use the formula for surface area of a pyramid.

$$S = \frac{1}{2}lp + B$$

$$S = \frac{1}{2} \cdot 4 \cdot 24 + 6 \cdot 6$$

$$S = 48 + 36$$

$$S = 84$$



Topic: Nets/Volume/Surface area of pyramids

Question: Find the width of the base.

A rectangular pyramid has a height of 6 and a base with length 8 and unknown width. If the pyramid's volume is 32, what is the width of the base?

Answer choices:

- A 2
- B 3
- C 4
- D 5



Solution: A

Use the volume formula for a pyramid.

$$V = \frac{1}{3}Bh$$

Because $B = lw$, we can rewrite the equation as

$$V = \frac{1}{3}lwh$$

Substituting for V , l , and h we get

$$32 = \frac{1}{3} \cdot 8 \cdot w \cdot 6$$

$$32 = 16w$$

$$w = 2$$

